ABSTRACT

Tools and methods for detecting the *presence bacteria, yeast and mold* in a sample obtained from a food sample are provided. The methods employ a polymerase chain reaction and primer and probe sets that are based on the 16S rRNA and squalene-hopene cyclase genes of *Alicyclobacillus and Geobacillus* and the 18S rDNA gene of mold and yeast.. The present invention also relates to primer and probe sets. Each primer and probe set comprises a forward primer and a reverse primer, both of which are from 15 to 35 nucleotides in length and a probe.